

## WHAT IS CLAIMED IS:

1. A process for preparing an RPET polymer blend component, including an RPET carrier and a specialty additive, comprising:

5 providing a quantity of RPET particles having an average mean particle size from about 500 microns to about 5 microns;

adding a specialty additive to the RPET particles; and

10 mixing the RPET particles and specialty additive, to prepare a homogeneous blend of RPET carrier and specialty additive.

2. The process for preparing an RPET polymer blend  
15 component according to Claim 1, wherein the average mean particle size of the RPET particles ranges from about 300 microns to about 15 microns.

3. The process for preparing an RPET polymer blend  
20 component according to Claim 1, wherein the specialty additive is selected from the group consisting of colorants, toners, dyes, ultraviolet blocking agents, oxygen scavengers, gas diffusion barrier agents, antioxidants, acetylaldehyde reduction additives, slip  
25 agents, lubricants, fillers, and mixtures thereof.

4. A process for preparing an RPET polymer blend component, including an RPET carrier and a specialty additive, comprising:

5           providing RPET particles having an average mean particle size from about 500 microns to about 5 microns;

          adding a specialty additive to the RPET particles, said specialty additive selected from  
10       the group consisting of colorants, toners, dyes, ultraviolet blocking agents, oxygen scavengers, gas diffusion barrier agents, antioxidants, acetylaldehyde reduction additives, slip agents, lubricants, fillers, and mixtures thereof; and

15           mixing the RPET particles and specialty additive, to prepare a homogeneous blend of RPET carrier and specialty additive.

5.    The process for preparing an RPET polymer  
20   blend component according to Claim 4, wherein the average mean particle size of the RPET particles ranges from about 300 microns to about 15 microns.

6. A process for preparing an RPET polymer blend component, including an RPET carrier and a specialty additive, comprising:

- 5 providing a quantity of recyclable polyethylene terephthalate;
- comminuting the polyethylene terephthalate to prepare RPET particles having an average mean particle size from about 500 microns to about 5 microns;
- 10 adding a specialty additive to the RPET particles; and
- mixing the RPET particles and specialty additive, to prepare a homogeneous blend of RPET carrier and specialty additive.

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7. The process for preparing an RPET polymer blend component according to Claim 6, wherein the average mean particle size of the RPET particles ranges from about 300 microns to about 15 microns.

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8. The process for preparing an RPET polymer blend component according to Claim 6, wherein the specialty additive is selected from the group consisting of colorants, toners, dyes, ultraviolet blocking agents,

25 oxygen scavengers, gas diffusion barrier agents, antioxidants, acetylaldehyde reduction additives, slip agents, lubricants, fillers, and mixtures thereof.

9. A process for preparing an RPET polymer blend component, including an RPET carrier and a specialty additive, comprising:

- providing a quantity of recyclable  
5 polyethylene terephthalate;  
comminuting the polyethylene terephthalate to  
prepare RPET particles having an average mean  
particle size from about 500 microns to about 5  
microns;  
10 adding a specialty additive to the RPET  
particles, said specialty additive selected from  
the group consisting of colorants, toners, dyes,  
ultraviolet blocking agents, oxygen scavengers, gas  
diffusion barrier agents, antioxidants,  
15 acetylaldehyde reduction additives, slip agents,  
lubricants, fillers, and mixtures thereof; and  
mixing the RPET particles and specialty  
additive, to prepare a homogeneous blend of RPET  
carrier and specialty additive.

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10. The process for preparing an RPET polymer blend component according to Claim 9, wherein the average mean particle size of the RPET particles ranges from about 300 microns to about 15 microns.

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